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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/768,263  
Filing Date: January 30, 2004  
Appellant(s): WARD ET AL.

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Stephen J. Stark  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed July 13, 2009 appealing from the Office action mailed December 31, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1-3, 5-9, 11-14 and 16-20.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2,517,877	Hinchman	8-1950
2,944,743	Kachergis	7-1960
3,116,880	Kuiken	1-1964
4,432,496	Ito	2-1984
5,025,990	Ridenour	6-1991
7,427,230	Blake et al.	9-2008

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 1, 3, 5-7, 9, 11, 12 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hinchman (2,517,877).**

Regarding claim 1,

Hinchman discloses an adjustable gas nozzle comprising:

a nozzle body member 8;

a conduit 7;

an adjusting member 25, 26 having:

a first end 25 with a first restricted orifice (orifice of 29 upstream of 27);

a second end 26 having a second orifice (upstream end of bore 33);

said first and second ends having a first passage 29, 33;

a coupling 16;

a by-pass passageway 18;

cooperative surfaces 19, 27;  
cooperating means 12, 32;  
a seal 15, 17.

The first position of Hinchman is where lock nut 32 is securely seated against seat 15 so that threads 12 and 30 are sealed.

The second position of Hinchman is where lock nut 32 is unseated from seat 15 so the threads 12 and 30 are loose so fluid is permitted to pass therebetween and the adjusting member 25 is retracted from seat 19. Fluid escaping between threads 12 and 30 is permitted into by-pass passageway 18 and through slits 27.

The coupling 16 between said conduit 7 and said nozzle body member 8 permits first and second alternative positions of the adjusting member 25, 26 between the conduit 7 and the nozzle body member 8.

The nozzle body member 8 is movable into said second position relative to said conduit 7 because the nozzle body member 8 must be removed to loosen lock nut 32 and then the nozzle body member 8 must be replaced onto the conduit 7.

While Hinchman may not have been intended to be used with lock nut 32 loosened, Hinchman is capable of performing the functional recitation.

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114.

Claim 1 has been amended to add the recitation "wherein the first position is configured to provide sufficient gas flow for use with propane and the second position is

configured to provide sufficient gas flow for natural gas usage for a selected downstream application in which significantly more natural gas would be required than propane for similar performance.” The recitation “configured to...” merely requires the ability to so perform. Additionally, the recitations “for use” and “for natural gas usage” merely indicated the intended use and do not constitute positively recited limitations.

Regarding claims 3 and 9.

While Hinchman does not disclose the material of conduit 7 or nozzle body member 8, figure 1 of Hinchman shows different crosshatching for conduit 7 and nozzle body member 8 indicating different materials. Therefore, one material is inherently harder than the other.

Regarding claims 5 and 11.

The seal 15, 17 is located intermediate the coupling 16 and the outlet (downstream end of nozzle body member 8).

Regarding claim 6.

The first restricted orifice (orifice of 29 upstream of 27) is smaller than and coaxial with the outlet (downstream end of nozzle body member 8).

Regarding claims 7 and 12.

The cooperating means 12, 32 includes an annular shoulder (seat 15 for lock nut 32) about an anterior wall 15. Hinchman further discloses a plurality of legs (the six points of hex nut 32).

Regarding claim 17.

Hinchman discloses an adjustable gas nozzle comprising:

- a nozzle body member 8;
- a conduit 7;
- an adjustment member 26 having:

- a first non-adjustable restricted orifice (downstream end opening/orifice of passage 33) at the terminal end 31 of the adjustment member 26 proximate to the second end 20 of the nozzle body member 8;

- a coupling 16;
  - a by-pass passageway 18;
  - cooperative surfaces (mating surfaces between head 31 and sleeve 25);
  - cooperating means 12, 32;
  - an integral seal 15, 17.

The first position of Hinchman is where lock nut 32 is securely seated against seat 15 so that threads 12 and 30 are sealed.

The second position of Hinchman is where lock nut 32 is unseated from seat 15 so the threads 12 and 30 are loose so fluid is permitted to pass therebetween and the adjusting member 25 is retracted from seat 19. Fluid escaping between threads 12 and 30 is permitted into by-pass passageway 18 and through slits 27.

The coupling 16 between said conduit 7 and said nozzle body member 8 permits first and second alternative positions of the adjusting member 26 between the conduit 7 and the nozzle body member 8.

The nozzle body member 8 is movable into said second position relative to said conduit 7 because the nozzle body member 8 must be removed to loosen lock nut 32 and then the nozzle body member 8 must be replaced onto the conduit 7.

While Hinchman may not have been intended to be used with lock nut 32 loosened, Hinchman is capable of performing the functional recitation.

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114.

**Claims 1, 3, 5-7, 9, 11, 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ridenour (5,025,990) in view of Ito (4,432,496).**

Regarding claims 1 and 17.

Ridenour discloses an adjustable gas nozzle comprising:

- a nozzle body member 12;
- a conduit 13;
- an adjustment member 14;
- a coupling 13 (threads);
- a by-pass passageway 35;
- cooperative surfaces 22,25;
- cooperating means 31, 32, 33.

Ridenour differs from what is being claimed in the seal being distinct from the coupling. Ito teaches an integral seal 28 between the conduit 27 and nozzle body member 41. It would have been obvious to a person having ordinary skill in the art at



the time of the invention to have provided the seal/locking bulges 28, 45 of Ito to the device of Ridenour to prevent accidental removal of the nozzle body member.

Although Ito describes, in column 4, lines 57-66, element 28 as an "outer annular budge" and element 45 as an "inner annular engaging bulge" rather than a "seal," Figure 2 shows element 28 in contact with nozzle body member 41 in both the first and second positions (left and right halves, respectively, of figure 2). Therefore, Ito's element 28 inherently provides a sealing function in addition to its locking feature.

Claim 1 has been amended to add the recitation "wherein the first position is configured to provide sufficient gas flow for use with propane and the second position is configured to provide sufficient gas flow for natural gas usage for a selected downstream application in which significantly more natural gas would be required than propane for similar performance." The recitation "configured to..." merely requires the ability to so perform. Additionally, the recitations "for use" and "for natural gas usage" merely indicated the intended use and do not constitute positively recited limitations.

Regarding claims 3 and 9.

Ridenour discloses, in column 2, line 67 through column 3, line 1, the conduit 13 made of aluminum and the nozzle body member 12 made of brass

Regarding claims 5 and 11.

Ito teaches that the seal 28 is located intermediate the coupling 45a and the outlet 42 of nozzle body member 41.

Regarding claim 6.

Ridenour discloses, in figure 1, the first restricted orifice 27 is smaller than and coaxial with the outlet 21 the nozzle body member 12.

Regarding claims 7 and 12,

Ridenour discloses the cooperating means 31, 32, 33 includes an annular shoulder 32 about an anterior wall of conduit 13. Hinchman further discloses a plurality of legs 31.

**Claims 1-3, 5-9, 11-14 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ridenour (5,025,990) in view of Kuiken (3,116,880).**

Regarding claims 1, 2, 8, 13, 17 and 18,

Ridenour discloses an adjustable gas nozzle comprising:

- a nozzle body member 12;
- a conduit 13;
- an adjustment member 14;
- a coupling 13 (threads);
- a by-pass passageway 35;
- cooperative surfaces 22, 25;
- cooperating means 31, 32, 33.

Ridenour differs from what is being claimed in the seal being distinct from the coupling. Kuiken teaches an integral seal ribs 84 on conduit 48 distinct from coupling 80, 82 located intermediate the coupling 82 and the outlet 70 of nozzle body member 16. The seal ribs 84 are integral with the conduit 48 because the seal ribs 84 are constituent or component parts of the conduit 48. It would have been obvious to a

person having ordinary skill in the art at the time of the invention to have provided the seal ribs of Kuiken to the device of Ridenour to improve the seal and reduce leaks.

Claim 1 has been amended to add the recitation "wherein the first position is configured to provide sufficient gas flow for use with propane and the second position is configured to provide sufficient gas flow for natural gas usage for a selected downstream application in which significantly more natural gas would be required than propane for similar performance." The recitation "configured to..." merely requires the ability to so perform. Additionally, the recitations "for use" and "for natural gas usage" merely indicated the intended use and do not constitute positively recited limitations.

Regarding claims 3, 9, 14 and 19.

Ridenour discloses, in column 2, line 67 through column 3, line 1, the conduit 13 made of aluminum and the nozzle body member 12 made of brass

Regarding claims 5, 11, 16 and 20.

Kuiken teaches that the seals 84 is located intermediate the coupling 82 and the outlet 70 of nozzle body member 16.

Regarding claim 6.

Ridenour discloses, in figure 1, the first restricted orifice 27 is smaller than and coaxial with the outlet 21 the nozzle body member 12.

Regarding claims 7 and 12.

Ridenour discloses the cooperating means 31, 32, 33 includes an annular shoulder 32 about an anterior wall of conduit 13. Ridenour further discloses a plurality of legs 31.

**Claims 1-3, 5-9, 11-14 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ridenour (5,025,990) in view of Kachergis (2,944,743).**

Regarding claims 1, 2, 8, 13, 17 and 18,

Ridenour discloses an adjustable gas nozzle comprising:

- a nozzle body member 12;
- a conduit 13;
- an adjustment member 14;
- a coupling 13 (threads);
- a by-pass passageway 35;
- cooperative surfaces 22, 25;
- cooperating means 31, 32, 33.

Ridenour differs from what is being claimed in the seal being distinct from the coupling. Kachergis teaches an integral seal 35, 36, 37 comprising ribs 35 on conduit 20 distinct from coupling 26 located intermediate the coupling 26 and the outlet (opening formed by flange 29 and washer 28) of nozzle body member 21. The seal 35, 36, 37 is integral with conduit 20 because seal rib 35 is one piece with conduit 20 and elements 35, 36, 37 are constituent or component parts of the conduit 20. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided the seal ribs of Kachergis to the device of Ridenour to improve the seal and reduce leaks.

Claim 1 has been amended to add the recitation "wherein the first position is configured to provide sufficient gas flow for use with propane and the second position is

configured to provide sufficient gas flow for natural gas usage for a selected downstream application in which significantly more natural gas would be required than propane for similar performance.” The recitation “configured to...” merely requires the ability to so perform. Additionally, the recitations “for use” and “for natural gas usage” merely indicated the intended use and do not constitute positively recited limitations.

Regarding claims 3, 9, 14 and 19.

Ridenour discloses, in column 2, line 67 through column 3, line 1, the conduit 13 made of aluminum and the nozzle body member 12 made of brass

Regarding claims 5, 11, 16 and 20.

Kachergis teaches that the seal 35, 36, 37 is located intermediate the coupling 20 and the outlet (opening formed by flange 29 and washer 28) of nozzle body member 21.

Regarding claim 6.

Ridenour discloses, in figure 1, the first restricted orifice 27 is smaller than and coaxial with the outlet 21 the nozzle body member 12.

Regarding claims 7 and 12.

Ridenour discloses the cooperating means 31, 32, 33 includes an annular shoulder 32 about an anterior wall of conduit 13. Ridenour further discloses a plurality of legs 31.

**(10) Response to Argument**

**Argument Section II.A.1.a.**

Appellant argues that Hinchman's element 25 is a sleeve and not a first end. Additionally, appellant argues that Hinchman's element 29 is a sleeve bore and not an orifice. Appellant is absolutely correct. Hinchman does not disclose the exact terms used by appellant, But the broadest reasonable interpretation of appellant's claimed invention does not require that the prior art disclose the exact terms used by appellant. Hinchman's element 25 is the first end (upper end) of the adjusting member. Hinchman's bore 29 is an opening at the first end (upper end) of the adjusting member.

**Argument Section II.A.1.b.**

Appellant argues that element 26 is an adjusting element and not a second end. Additionally, element 22 is a bore and not an orifice. Hinchman's element 26 is the second end (lower end) and bore 33 is an opening at the second end (lower end).

**Argument Section II.A.1.c.**

Appellant argues that there is no position of the device in which gas may locally pass through bore 18 without outgassing through the first passageway. The second position of Hinchman is where lock nut 32 is unseated from seat 15 so the threads 12 and 30 are loose so fluid is permitted to pass therebetween and the adjusting member 25 is retracted from seat 19. Fluid escaping between threads 12 and 30 is permitted into by-pass passageway 18 and through slits 27. The second gas flow is greater than the first gas flow when the supply of gas is increased for the second position relative to the gas flow in the first position. The functional language merely requires the ability to so operate. Even though Hinchman's device may not operate as appellant's claimed invention, Hinchman's device has the capability to operate as defined by appellant's

claimed invention. Claim 1 is directed to an apparatus. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114.

**Argument Section II.A.1.d.**

Appellant argues that the Office Action's proposed construction renders Hinchman unusable for its intended purpose. Hinchman discloses the structural elements of the claimed invention as outlined above. Additionally, Hinchman is capable of meeting the functional recitations of the claimed invention. It may not be the manner in which Hinchman intended to operate, but the device is capable of operating in such a manner. Claim 1 is directed to an apparatus. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114.

**Argument Section II.A.1.e.**

Appellant argues that the Office action does not address the cooperating surfaces 19, 27 being spaced apart in the second position. When element 26 is retracted into conduit 7 and element 25 resting on element 26, i.e., in the upright position as in figure 1, surfaces 19 and 27 would be spaced apart.

**Argument Section II.A.1.f.**

Appellant argues functional recitation directed to propane and natural gas flow. Hinchman's device is configured to allow gas flow. Therefore, Hinchman's device has

the capability to provide sufficient has flow of propane in the first position and natural gas in the second position.

**Argument Section II.A.1.g.**

Appellant raises no new issues.

**Argument Section II.A.2.**

Appellant argues that the different cross hatching for conduit 7 and nozzle body member 8 represent different components rather than different materials. Blake et al. (7,427,230), column 11, lines 51-59, is provided as evidence that different cross hatching represents different materials.

**Argument Section II.A.3.**

Appellant argues that Hinchman's outlet is element 23. Nozzle body member 8 has an outlet (the downstream end of conical seat 19) that is larger than the first restricted orifice (orifice of 29 upstream of 27).

**Argument Section II.A.4.**

Appellant argues that the Office action ignores the limitation, "the space between adjacent legs providing the bypass passageway for gas flow therebetween when said cooperating surfaces are not engaged." The space between adjacent points of the six points of hex nut 32 is in passageway 18. Gas flowing in passage 18 inherently flows in space between the adjacent points of the six points of hex nut 32.

**Argument Section II.A.5.**

Appellant raises no new issues. Appellant's argument has been addressed in Section II.A.2 above.



**Argument Section II.A.6.**

Appellant raises no new issues. Appellant's argument has been addressed in Section II.A.4 above.

**Argument Section II.A.7.a.**

Appellant argues that reading of claim 7 on Hinchman is a creative mischaracterization of the elements in Hinchman. The reading of claim 7 on Hinchman is literal and reasonable. Appellant refers to element 25. Element 26 is identified as the adjustment member.

**Argument Section II.A.7.b.**

Appellant argues that the cooperating surfaces in the first position to seal the body member and the adjusting member to close off flow through the bypass to permit a first gas through the first restricted orifice so that the gas regulated by the first restricted orifice makes not sense based on the interpretation of Hinchman. Claim 17 does not require that the cooperating surfaces be an element of the adjustment member.

Regarding appellant's second point directed to the second position, claim 17 does not require that the cooperating surface be an element of the adjustment member.

**Argument Section II.A.7.c.**

Appellant argues functional recitation directed to propane and natural gas flow. Hinchman's device is configured to allow gas flow. Therefore, Hinchman's device has the capability to provide sufficient has flow of propane in the first position and natural gas in the second position.

**Argument Section II.A.7.d.**

Appellant raises no new issues.

**Argument Section II.B.1.**

Appellant argues that Ito's bulge 28 cooperates with corresponding bulge 45 to prevent accidental removal of the cover and no seal is taught by Ito. Although Ito describes, in column 4, lines 57-66, element 28 as an "outer annular budge" and element 45 as an "inner annular engaging bulge" rather than a "seal," Figure 2 shows element 28 in contact with nozzle body member 41 in both the first and second positions (left and right halves, respectively, of figure 2). Therefore, Ito's element 28 inherently provides a sealing function in addition to its locking feature.

**Argument Section II.B.2.a.**

Appellant raises no new issues. Appellant's argument has been addressed in Section II.B.1 above.

**Argument Section II.B.2.b.**

Appellant argues that there is no motivation to combine the teaching of Ito with Ridenour. Motivation to prevent inadvertently disengaging the cover is found in Ito, column 4, line 67.

**Argument Section II.C.1.**

Appellant argues that Kuiken's seals 84 are not integral to the conduit 48. The seal ribs 84 are integral with the conduit 48 because the seal ribs 84 are constituent or component parts of the conduit 48. Merriam-Webster.com provides the following definitions for "integral"

- 1 a : essential to completeness : constituent <an integral part of the curriculum> b (1) : being, containing, or relating to one or more mathematical integers (2) : relating to or concerned with mathematical integrals or integration c : formed as a unit with another part <a seat with integral headrest>
- 2 : composed of integral parts
- 3 : lacking nothing essential : entire

Definition 1.c provides, "formed as a unit with another part" and definition 2 provides, "composed of integral parts." Kuiken's seal 84 forms a unit with conduit 48.

**Argument Section II.C.2.a.**

Appellant raises no new issues. Appellant's argument has been addressed in Section II.C.1 above.

**Argument Section II.C.2.b.**

Appellant argues the different magnitude of the sealing between gas and water. Appellant's argument is not commensurate in scope with the claimed invention. The claimed invention requires a seal and not a particular seal which provides a certain magnitude of sealing.

**Argument Section II.D.a.**

Appellant argues that Kachergis shows a set of ribs 35 that do not provide any seal with the nozzle body. The rejection is based on a reading of Kachergis where elements 35, 36, 37 are read as the "seal...integral to the conduit." The seal 35, 36, 37

is integral with conduit 20 because seal rib 35 is one piece with conduit 20 and elements 35, 36, 37 are constituent or component parts of the conduit 20.

**Argument Section II.D.2.a**

Appellant raises no new issues. Appellant's argument has been addressed in Section II.D.a above.

**Argument Section II.D.2.b**

Appellant argues the different magnitude of the sealing between gas and water. Appellant's argument is not commensurate in scope with the claimed invention. The claimed invention requires a seal and not a particular seal which provides a certain magnitude of sealing.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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